REMARKS

I. Introduction

In response to the pending Office Action, Applicants have amended claims 1, 3-5 and added new claim 50 in order to further clarify the subject matter of the present invention and to overcome the § 112 rejections. Claims 25 and 27 have been deleted. Support for the amendments to claims 1 and 3-5 and for new claim 50 may be found, for example, in Figs. 1, 12 and 15 and related portions of the specification.

For the reasons set forth below, it is respectfully submitted that all pending claims are in condition for allowance.

II. The Rejection Of Claims 1-39 Under 35 U.S.C. § 112

Claims 1-5 were rejected under 35 U.S.C. § 112, first paragraph, because the specification does not provide enablement for BInAlGaN. Claims 6-39 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicants respectfully traverse the rejections for at least the following reasons.

Claim 1 is amended in order to restrict the material of the semiconductor device to a III-V Nitride semiconductor. As examples of III-V nitrides are provided in the specification in Figs. 1, 12 and 15 and the related descriptions, and as the essential feature of amended claim 1 is similar to that of claims 6 and 21 (a III-V nitride material), Applicants assert that claims 1-5 are indeed enabled by the specification and respectfully request that the rejection of claims 6-39 under 35 U.S.C. § 112 be withdrawn.

Moreover, a copy of N. Kuroda et al., "Step-controlled VPE growth of SiC single crystals at low temperatures", Extended, Abstract of International Conference on Solid State Devices and Materials, Tokyo, 1987 is provided for the record.

In order to form 4H-polytype epitaxial layers, the control of the initial growth is the most critical. The details of the initial growth of 4H-AlN on 4H-SiC is described in the embodiments. Once the initial stage is completed, the consecutive 4H-polytype AlGaN growth is easy for any alloy composition as long as the lattice mismatch is relatively small. Thus, any special growth condition is not required for the consecutive alloy growths. As the details of the inheritance of the polytype in the homo-epitaxial growth are mentioned in the Kuroda reference, it is shown that 4H-polytype AlGaN ternary alloy is easily grown by applying Ga supply immediately after the initial 4H-AlN growth on 4H-SiC substrate by MBE (Molecular Beam Epitaxy), for example, by keeping the same growth temperature.

Furthermore, Applicants submit that the subject matters of claims 6-39 are described in the related portions as set forth in the following table:

Claims	**Related portions in Specification**
6-14	First embodiment with reference to Fig. 1 (semiconductor laser)
15	Second embodiment with reference to Fig. 12 (semiconductor laser, including no epitaxial region at a side surface of the AlN layer)
16-20	Third embodiment with reference to Fig. 12 (semiconductor laser)
21-24, 26, 28-29	Fourth embodiment with reference to Fig. 14, (LED)
30-39	Fifth embodiment with reference to Fig. 15 (FET)

Accordingly, as each of claims 1-39 is sufficiently enabled in at least the specification and the Kuroda reference, Applicants respectfully request that the § 112 rejections be withdrawn.

III. Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication of which is respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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